

REMARKS

Withdrawal of the outstanding rejections and allowance of the present application for the reasons given hereinbelow is respectfully requested.

The title of the invention was amended so as to be more aptly descriptive of the subject matter claimed. Reconsideration and withdrawal of the outstanding objection thereto is respectfully requested.

The currently pending claims 1-44 cover a transmitter, a receiver, a transceiver, a network which comprises a transmitter device and at least one receiver device, and also cover a method of providing clock information for effecting synchronisation (to a common time reference having distinguishable instances) of the receiver with the transmitter. With regard to Fig. 1 of the drawings, a transmitter can be considered as relating to a transmitting portion of the device of the master unit 2 and the receiver can be considered as corresponding to the receiver portion of the device of the slave unit 6, with regard to the low power frequency hopping network such as employed in connection with the Bluetooth device scheme, although not limited thereto. Fig. 7 of the drawings is an example of a suitable transceiver unit.

According to the outstanding Office Action, the earlier rejections given with regard to claims 1-40 are repeated in the current Office Action. Further, claims 41-44 stand rejected, also, over the teachings of Haartsen (U.S. Patent No. 6,574,266), newly cited. As will be shown below, the invention according to claims 1-44 could not have been anticipated or rendered obvious as that alleged in the outstanding rejections. Therefore, insofar as presently applicable, these rejections are traversed and reconsideration and withdrawal of the same is respectfully requested.

According to independent claim 1 and, also, with regard to the corresponding dependent claims thereof, the invention, which is directed to a transmitter... in a network comprising the transmitter and at least one receiver, calls for the following:

- (i) the transmitter is arranged to synchronise to a common time reference having distinguishable instances;
- (ii) means for reading a real time clock at an identified instance of the common time reference; and
- (iii) means for transmitting an identification of the real time clock value for a first instance and an identification of the first instance.

It is submitted, the schemed transmitter as set forth according to claims 1+ could not have been anticipated or realizable from Smolentzov's teachings for the reason that the above three set forth featured aspects were neither disclosed, or, for that matter, suggested from Smolentzov et al. Reference is made in the Office Action, in Items 6 and 10, to column 2, lines 44-60, of Smolentzov et al. In this passage, for example, Smolentzov merely point out the facilitating aspects of using the Bluetooth standard. For example, Smolentzov et al. state that "every radio unit in the Piconet uses the master identity and real time clock to track the hopping channel " (see column 2, lines 56-60). In other words, Smolentzov et al.'s disclosure fails to identify the above set forth featured aspects (i) to (iii), of base claim 1.

There appears to be some misunderstanding of the subject matter according independent claim 1 and, therefore, also according to the corresponding dependent claims thereof. For example, an embodiment directed to the present invention necessarily uses two separate time references:

- (1) a common time reference; and
- (2) a real time clock.

Regarding the "common time reference," related discussion can be found on page 5, lines 8-21, and on page 13, lines 12-18, of the Substitute Specification and

in conjunction with clock 168 shown in Fig. 7 of the drawings. Regarding the set forth "real time clock," as used in the present invention, an example thereof can be seen with regard to real time clock 190 shown in Fig. 7 of the drawings. The referred to showings in the Specification and Drawings are to be considered as an example representation thereof and are not to be construed as being limited thereto.

In accordance with the present invention, the synchronizing of a real time clock in the receiver to a real time clock in a transmitter would be effected by using a common time reference that has distinguishable instances such as discussed on page 5, lines 8-10 and page 5, line 28, to page 6, line 2, of the Substitute Specification. A device according to the described embodiment in the present specification, consistent with that set forth in claims 1+ transmits two separate identifications, one for each of the time references, i.e., it transmits both an identification of the real time clock value for an instance and an identification of the instance.

With regard to the disclosed first example embodiment, the transmitter transmits a real time clock value and an identification of the instance at which that real time clock value was current to a receiver. The receiver receives the real time clock value at a later time and at a corresponding later instance. The receiver calculates the time difference between the instance at which the real time clock value was transmitted and the instance at which it was received. The time difference is then added on to the received real time clock value to synchronize the receiver's real time clock to the transmitter's real time clock (see Fig. 2 of the drawings and the discussion thereof beginning on page 5 of the Substitute Specification).

With regard to the disclosed second embodiment, the transmitter reads a real time clock value and a first instance at which it is current. It then determines a

second instance at which a receiver should synchronize its real time clock to the transmitters' real time clock. The transmitter then calculates the time difference between the first and second instances and adds it on to the real time clock value. The real time clock value (with the time difference added) and the identification of the second instance are transmitted to the receiver. The receiver synchronizes its real time clock value to the received real time clock value when the instance at the receiver is equal to the second instance. An example of this is given with regard to Fig. 3 of the drawings and the related discussion, beginning on page 6, line 20, of the Substitute Specification.

An example application in accordance with both the first and second example disclosed embodiments is given in connection with the discussion of the operation of the transceiver unit shown in Fig. 7 of the drawings. A common time reference 20, referred to in Figs. 2 and 3 of the drawings, is based upon the Bluetooth clock. The Bluetooth clock is a synchronized clock which is shared amongst the devices participating in a Piconet. In the master unit, the Bluetooth clock is the unit's clock offset by a particular amount. The synchronisation between the Bluetooth clocks is maintained by the synchronizer 152 under the control of the controller 160 (see page 14, line 22 *et seq.* in the original Specification). An instance in the Bluetooth clock reference can be defined by the frame or slot number *n* and a trigger instant within a frame or slot (page 13, line 29 *et seq.* in the Substitute Specification). In accordance with operation thereof such as in the first embodiment and second embodiment, discussed above, an example description is given on page 15, line 7 *et seq.* and on page 15, line 32 *et seq.* of the Substitute Specification.

In the rejections, it appears that the Examiner is relying on the actual Bluetooth standard specification for purposes of supporting the allegation that the above set forth features according to claim 1 are inherent to Smolentzov et al. It is

submitted, however, that the invention according to independent claim 1 and, also, according to the corresponding dependent claims features an improvement on the Bluetooth standard Specification. Such is also the case with regard to the other pending independent claim groups which, likewise, contain featured aspects required according to base claim 1, although presented somewhat differently therefrom.

Applicants submit, it is wrong to assume that the currently set forth featured aspects such as, for example, “means for reading a real time clock at an identified instance of the common time clock reference” and “means for transmitting an identification of the real time clock value for a first instance and an identification of the first instance” are featured in connection with Smolentzov et al.'s BRFP's. In this regard, the earlier presented rebuttal discussion/arguments in the remarks of the Amendment filed on December 21, 2004, regarding the applicability of Smolentzov et al., are incorporated herein for this response. It is submitted, also, Smolentzov et al. merely disclosed the transmittal of clock offsets which are independent of the instance at which they are measured (see column 10, lines 46, to column 11, line 3, of Smolentzov et al). The above supported discussion/rebuttal arguments pertaining to claims 1+ are also applicable in connection with independent claims 16, 34, 35-40 as well as with regard to the corresponding dependent claims thereof noting that they all contain featured aspects called for with regard to claim 1, although presented somewhat differently therefrom.

As emphasized hereinabove, Smolentzov et al. merely disclosed the transmittal of clock offsets which are independent of the instance at which they are measured. Such, it is submitted, is also supported by Haartsen in his publication entitled, “BluetoothTM : A New Radio Interface Providing Ubiquitous Connectivity.” The passage on Synchronisation (see page 111 of this publication), referred to in

the rejection under Item 12 of the Detailed Action, merely discloses that each device includes a free running native clock (a Bluetooth clock, not a real time clock) and that a master device transmits the value of this clock to a slave device for synchronization. The slave device adds an offset to its native clock so that it is "hop synchronized" to the master device. Haartsen, therefore, disclosed synchronising to a common time reference. That is Haartsen did not disclose that the master transmits identification of a real time clock value for an instance and an identification of the instance at which the real time clock was read. Therefore, from Haartsen, it is clearly apparent that the Bluetooth standard (as defined by Haartsen) does not support the allegation that the above referred to featured aspects according to claim 1 and, therefore, also according to the other independent claims are inherently disclosed by Smolentzov et al. It is submitted, therefore, for at least the above reasons, the invention according to independent claim 1 and the corresponding dependent claims thereof could not have been anticipated or rendered obvious in view of Smolentzov et al. Likewise, the invention according to independent claims 16 and 34-40 also could not have been anticipated or rendered obvious from Smolentzov for the same and similar reasons as that argued above with regard to independent claim 1.

Noting that Geller et al., also does not obviate the deficiencies in Smolentzov et al., the rejection based on the combination of Smolentzov et al., in view of Geller et al., should also be withdrawn for the same and similar reasons therefore.

Reconsideration and withdrawal of the rejection of claims 41-44 over the teachings of Haarsten (U.S. Patent No. 6,574,266), newly cited, is also respectfully requested. Haartsen '266 disclosed how an ad-hoc communication system may be set up between remote communication terminals. With reference to Fig. 1 in Haartsen ('266), a base station 110 first transmits a beacon signal which includes

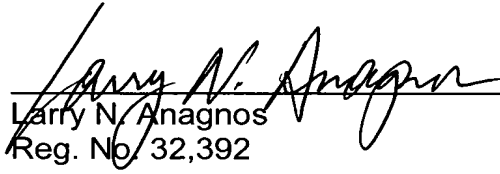
information regarding the identity of the base station 110 and a value of the base station's system clock. The beacon signal may be received by a terminal 140 which may then lock onto the base station 110 using the value of the base station system clock to determine the frequency hopping sequence. Figs. 7A-7C illustrate how a direct connection may be set up between terminals 240 and 250. If a furthest base station (e.g., 211 in Fig. 7D in Haartsen) is present, handover of the terminals 240 and 250 may occur from the base station 210 to the base station 211. As is clearly apparent, Haartsen ('266) is not relevant to claim 41 and, likewise, with regard to the other ones of the claims to which it has been applied. For example, with regard to claim 41, Haartsen ('266) did not teach the set forth "means for obtaining a clock value at an identified instance of the common time reference input" or "means for transmitting an identification of a first instance of the common time reference and an identification of a clock value that is valid at the first instance of the common time reference." For the same and similar reasons, the invention according to claims 42-45 also could not have been realizable from Haartsen ('266).

Therefore, in view of the supportive discussion/rebuttal arguments presented herein above along with the amendment made to the title of the invention, reconsideration and withdrawal to the objection to the title and rejection of the currently pending claims as well as an early formal notification of allowance of the above-identified application, are respectfully requested.

To the extent necessary, applicants petition for an extension of time under 37 CFR §1.136. Please charge any shortage in the fees due in connection with the filing of this paper, to the Deposit Account of Antonelli, Terry, Stout & Kraus, LLP, Dep. Acct. No. 01-2135 (1156.41276X00), and please credit any excess fees to such deposit account.

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Respectfully submitted,
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